



Figure 1.4: Basic types of body movement.

**Table 1.1: Basic movements involving a joint**

Term	Meaning of term	Example of this movement
<b>Flexion</b>	Flexion is bending the joint to reduce the angle between two or more bones. It occurs in the sagittal plane. Flexion is motion in the anterior (forward) direction at the joints of the neck, trunk, upper extremities, and hips. For the knee, ankle, foot, and toes, flexion occurs in the posterior (backward) direction.	If you touch your right shoulder with your right hand, then your elbow is in flexion (flexed).
<b>Extension</b>	Extension is straightening a joint to increase the angle. It also occurs in the sagittal plane.	If you straighten your legs, the knees have undergone extension (extended).
<b>Abduction</b>	Abduction is movement away from the median plane. This movement occurs in the frontal (coronal) plane.	If you stand with your feet apart, your legs are abducted.
<b>Adduction</b>	Adduction is the opposite of abduction. It is movement towards the median plane.	If you squeeze your knees together, then you are adducting your legs.
<b>Internal Rotation</b>	Internal rotation of a limb moves its anterior surface medially.	Internal rotation of the hip turns the knee and foot towards the midline.
<b>External Rotation</b>	External rotation is the opposite of internal rotation.	You externally rotate your hip when you point your feet out to the side.
<b>Circumduction</b>	Circumduction is a circular motion combining flexion, extension, abduction, and adduction.	Making circles in the air with your arms is an example of circumduction.
<b>Supination</b>	Supination is the lateral rotation of the hand and forearm such that the palm faces forward as in the anatomical position.	When putting a screw into the floor using your right hand, you have to supinate your forearm.
<b>Pronation</b>	Pronation is the medial rotation the hand and forearm such that the palm faces backward from the anatomical position.	When unscrewing a screw from the floor with your right hand, you must pronate your forearm.
<b>Protraction</b>	Protraction is moving in an anterior (forward) direction.	Sticking your chin out is an example of protraction.
<b>Retraction</b>	Retraction is moving in a posterior (backward) direction.	Pushing your shoulders back to squeeze your shoulder blades is an example of retraction.
<b>Dorsiflexion</b>	Dorsiflexion is movement of the ankle in the sagittal plane that decreases the angle between the foot and the lower leg.	When you point your foot towards your head, your ankle is dorsiflexed.
<b>Plantar Flexion</b>	Plantar flexion is movement of the ankle in the sagittal plane that increases the angle between the foot and the lower leg.	When you stand on "tip-toes," your ankles are plantar flexed.
<b>Inversion</b>	Inversion occurs when the medial border of the foot is raised such that the sole of the foot is turned inward.	When you stand on the outer edge of your foot, your foot is inverted.
<b>Eversion</b>	Eversion occurs when the lateral border of the foot is raised such that the sole of the foot is turned outward.	When you stand on the inner edge of your foot, your foot is everted.
<b>Elevation</b>	Elevation involves the raising up to a more superior position.	When you hunch your shoulders, your shoulders are elevated.
<b>Depression</b>	The opposite action to elevation, depression, involves the pulling down to a more inferior position.	When you slouch your shoulders, your shoulders are depressed.
<b>Opposition</b>	Opposition occurs when the thumb comes into contact with one of the other fingers.	Bring your thumb over to touch any one of the other fingers.
<b>Reposition</b>	Reposition occurs when the thumb is returned back to the anatomical position.	When you move your thumb from your finger and return it to the anatomical position, the thumb is repositioned.